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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,739	06/19/2001	Karl Kammerlander	112740-167	8564

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EXAMINER

D AGOSTA, STEPHEN M

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 04/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,739

Applicant(s)

KAMMERLANDER ET AL.

Examiner

Stephen M. D'Agosta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 7-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 June 0201 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>7</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Preliminary Amendment

The examiner notes the cancellation of claims 1-6 and addition of new claims 7-12 per preliminary amendment (as well as other modifications to the application).

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings were received on 6-19-01 and have been reviewed by the draftsperson and examiner.

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 12-Feb-2001 has been received and accordingly, the information disclosure statement is being considered by the examiner.

Specification

For priority claim - A reference to the prior application must be inserted as the first sentence of the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-10 and 12 ^{are} rejected under 35 U.S.C. 103(a) as being unpatentable over

Hamada EP0895437A and further in view of Sheperd et al. EP0399612A2 and Hamalainen WO-9859441.

As per **claim 7**, Hamada teaches a method for changing radio channels in a mobile system comprising:

Providing an existing duplex radio link having both a first physical radio channel for transmitting information via an air interface and a second physical channel for transmitting information in an opposite direction to the first physical channel via the air interface

Changing, upon a disturbance of the duplex radio link (abstract and figures 1,6 and 9 [see #901, #903, #904, #905 where slots are changed] and figure 17 and C3, L47 to C4, L3 and C5, L54 to C6, L51 and C8, L5-35 and C9, L45 to C11, L11 and C12, L9-18, L41-47 and C13, L26 to C14, L1 and C15, L46-53 and C16, L22-57 and C17, L20-47)

But is silent on only the disturbed one of the first physical channel and the second physical radio channel wherein the undisturbed one of the first channel and second channel is retained.

Sheperd teaches reassignment of a single duplex channel/slot (and not both as is taught by Hamada – C6, L9 to C7, L14). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Hamada, such that reassignment of a single duplex channel/slot is allowed, to provide means sending data

in one direction only if required (and/or a lot of data in one direction and only a little in the other).

Hamalainen teaches transmit/receive in different/separate TDMA frames which can be changed in one direction (eg. transmit) without affecting the other (eg. receive) [abstract and figure 2]. Hence, it would have been obvious to one skilled in the art at the time of the invention to modify Hamada in view of Sheperd, such that only the disturbed channel is changed leaving the new and undisturbed channels being retained, to provide means for only changing the channel which is being disturbed which reduces the need to handoff and allows continued communications (eg. in one direction).

As per **claim 8**, Hamada teaches claim 7 wherein the mobile system exhibits a TDMA component (C3, 47-55) in which only a time slot of the disturbed one of the first physical channel and the second physical radio channel is changed (see figures 6 and 17).

As per **claim 9**, Hamada teaches claim 7 wherein the radio system exhibits an FDMA multiple access component in which both a time slot and a carrier frequency of the disturbed one of the first and second physical radio channel is changed (figure 8 teaches changing carrier, #804, #806).

As per **claim 10**, Hamada teaches claim 7 wherein the radio system exhibits both a TDMA multiple access and an FDMA multiple access component in which both a time slot and a carrier frequency of the disturbed one of the first and second physical radio channel is changed (figure 8 teaches changing carrier, #804, #806 while figure 9 teaches changing timeslots #903, #905).

As per **claim 12**, Hamada teaches claim 7 wherein each available radio channel of the mobile system can be used both as a first channel and as a second channel (figures 6 and 17 show that channels can be assigned in any way).

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Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada in view of Sheperd and Hamalainen and further in view of Gitlin et al. US 6,018,528.

As per **claim 11**, the combination of Hamada in view of Sheperd and Hamalainen teaches claim 7 **but is silent on** wherein the radio system exhibits a CDMA multiple access component in which the transmission code of the disturbed one of the first and second physical radio channel is changed (figure 8 teaches changing carrier, #804, #806 while figure 9 teaches changing timeslots #903, #905).

While CDMA is known in the art and would key off "transmission code", the examiner puts forth **Gitlin** who teaches optimization of spectral efficiency (eg. can allocate more/less bandwidth as needed) that supports time, frequency and CDMA systems (abstract).

It would have been obvious to one skilled in the art at the time of the invention to modify the combination of Hamada, Sheperd and Hamalainen, such that CDMA is supported, to provide means for the invention to interoperate on highly utilized nationwide/worldwide cellular systems today.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1. Tomabechi US 5,260,944 teaches dynamic channel allocation.
2. Kreul, WO9917468 teaches TDMA transfer between mobile and base station.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

Stephen D'Agosta

A handwritten signature in black ink, appearing to be 'SD' or 'S.D.', written in a cursive style.